Atrial Fibrillation Pharmacologic Management for the Generalist

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Disclosure Information

Bradley P. Knight MD
Consultant, Speaker, Investigator, Fellowship Support
• Boston Scientific
• Medtronic
• St. Jude Medical
• Biotronik
• Biosense Webster
• SentreHeart
• Jansen
• Apama Medical

Equity, Ownership, Stock
• None
Atrial fibrillation – not atrial flutter

Atrial flutter:
Flutter waves have a constant rate and morphology
• 55 y/o man with highly symptomatic paroxysmal AF for past 3 months.
• Labs and stress echo were normal.
• Currently taking metoprolol 50 mg per day.

What do you recommend next?

Rate Control vs. Rhythm Control

• A rate control strategy alone, without attempts at restoration or maintenance of sinus rhythm, is reasonable in some patients with AF, especially those who are asymptomatic.

AFFIRM Investigators, NEJM 2002
Van Gelder, et al. NEJM 2002
“Before choosing rate control as a long-term strategy, the clinician should consider how permanent AF is likely to affect the patient in the future...to ensure that a window of opportunity to maintain SR is not overlooked early in the course of management of a patient with AF.”

ACC/AHA/ESC AF 2006 Guidelines
AF Guidelines - Rhythm Control

• Before initiation AADs, treatment of precipitating or reversible causes of AF is recommended (I,C)

Principles of Rhythm Control

• Pharmacological therapy to maintain SR should be considered in patients who have troublesome symptoms related to paroxysmal AF or recurrent AF after CV who can tolerate AA drugs, and have a good chance of remaining in sinus rhythm.

• Drugs should be used to decrease the frequency and duration of episodes, and to improve symptoms.

• AF recurrence while taking an AA drug is not indicative of treatment failure and does not necessitate a change in AA therapy.
Principles of Rhythm Control

- Antiarrhythmic drug choice is based on side effect profiles and the presence or absence of structural heart disease, heart failure, and hypertension.

- Sodium channel blockers (Vaughn Williams class I drugs such as flecainide) should be avoided in patients with structural heart disease.

### 2014 ACC/AHA/HRS AF Guidelines

- **No Structural Heart Disease**
  - Dofetilide
  - Flecainide
  - Propafenone
  - Sotalol
- **Structural Heart Disease**
  - CAD
  - HF
  - Dofetilide
  - Dronedarone
  - Sotalol

**Footnotes:**
1. Catheter ablation is only recommended as first-line therapy for patients with paroxysmal AF (Class Ia recommendation).
2. Drugs are listed alphabetically.
3. Depending on patient preference when performed in experienced centers.
4. Not recommended with severe LVH (wall thickness >1.5 cm).
5. Should be used with caution in patients at risk for ferriadi de paroxiss ventricular tachycardia.
6. Should be combined with AV nodal blockade in atria.
• 55 y/o man with highly symptomatic paroxysmal AF for past 3 months.
• Labs and stress echo were normal.
• Currently taking metoprolol 50 mg per day.

What do you recommend next?
• Flecainide 100 mg bid. EKG in one week.

Case

• 50 y/o man high school coach admitted with newly dxed persistent AF, severe HF, EF 23%
• Started on HF medications and OAC
• TEE-guided CV followed by AF in one hour
• What do you recommend next?
Rate Control

- HR<80 is reasonable for symptomatic AF patients (IIA,B)
- HR<110 may be reasonable with asymptomatic patients with normal LV function (IIB,B)
- With pre-excitation and AF, digoxin, CCBs and IV amiodarone should not be administered (III,B,H)
- Dronedarone should not be used in permanent AF (III,B,H)

AF Prophylaxis

- ACE/ARB is reasonable for AF prevention in systolic heart failure patients (IIA,B)
- ACE/ARB can be considered for prevention in HTN (IIB,B)
- Statins may be considered for new onset AF after CABG (IIB,A)
- ACE/ARB/Statin is not beneficial for prevention without cardiovascular disease (III,B,NB)
2014 ACC/AHA/HRS AF Guidelines

Case

- 50 y/o man high school coach admitted with newly dxed persistent AF, severe HF, EF 23%
- Started on HF medications and OAC
- TEE-guided CV followed by AF in one hour
- What do you recommend next?
- Started on dofetilide in hospital and repeat CV successful
- AF recurs one week after hospital discharge
- Undergoes catheter ablation
- AF recurs next day and has worsening HF
- What do you recommend next?

AADs should not be continued when AF becomes permanent (III,C,H) including dronedarone (III,B,H)

Dronedarone should not be used with Class III/IV CHF with an episode of CHF in the last 4 weeks (III,B,H)
Case

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- Started on HF medications and OAC
- TEE-guided CV followed by AF in one hour
- *What do you recommend next?*
- Started on dofetilide in hospital and repeat CV successful
- AF recurs one week after hospital discharge
- Undergoes catheter ablation
- AF recurs next day and has worsening HF
- *What do you recommend next?*
- Amiodarone. Diuresis. Repeat CV.
- In sinus rhythm 6 months later. EF normal.